

Appl. No. 09/683,254
Response Dated 1/13/2004
Reply to Office action of October 14, 2003

Amendment to the Claims

1-2. (Cancelled)

3. (Currently Amended) The actuated seal of claim 4, wherein said displacement apparatus comprises ~~an~~ said actuator and ~~a~~ said return device for moving said seal radially with respect to a rotating member.

4. (Currently Amended) An actuated seal assembly for controlling flow in a fluid path in turbomachinery comprising:

a seal;

a seal carrier coupled to said seal, said seal carrier disposed in said turbomachinery;

a displacement apparatus coupled to said seal carrier for positioning said seal to control said flow in said fluid path, wherein said displacement apparatus is selected from the group consisting of an actuator, a return device, and combinations thereof, and ~~The actuated seal of claim 1, wherein said displacement apparatus selected from the group consisting of an actuator, a return device, and combinations thereof~~ is further selected from the group consisting of springs, bellows, tubes, rods, cams, hydraulic cylinders, pneumatic devices, piezoelectric devices, wires, cables, bi-metallic materials, phase-changing materials, solenoids and combinations thereof; and

a drive system for powering said displacement apparatus.

5. (Currently Amended) An actuated seal assembly for controlling flow in a fluid path in turbomachinery comprising:

a seal;

a seal carrier coupled to said seal, said seal carrier disposed in said turbomachinery;

a displacement apparatus coupled to said seal carrier for positioning said seal to control said flow in said fluid path, wherein said displacement apparatus is selected from the group consisting of an actuator, a return device, and combinations thereof, and wherein said displacement apparatus selected from the group consisting of an actuator, a return device, and combinations thereof further ~~The actuated seal of claim 4, wherein said tube comprises an inflatable tube;~~ and

Appl. No. 09/683,254
Response Dated 1/13/2004
Reply to Office action of October 14, 2003

a drive system for powering said displacement apparatus.

6. (Original) The actuated seal of claim 4, wherein said rod is spring loaded.

7. (Currently Amended) The actuated seal of claim 4, wherein said seal is selected from the group consisting of brush seals, labyrinth seals, abradable seals, honeycomb seals, leaf seals, finger seals, ceramic seals, aramid seals, aspirating seals and combinations thereof.

8. (Cancelled)

9. (Currently Amended) The actuated seal of claim 4, wherein said seal carrier comprises a plurality of seal carriers and wherein said displacement apparatus is disposed to control each of said seal carriers in said seal assembly.

10. (Currently Amended) The actuated seal of claim 4, wherein said displacement apparatus is disposed to control a plurality of said seal carriers in said seal assembly.

11. (Currently Amended) The actuated seal of claim 4, wherein said seal carrier comprises a plurality of seal carriers and wherein said displacement apparatus is disposed to control a respective seal carrier in said seal assembly.

12. (Currently Amended) The actuated seal of claim 4, wherein said drive system is bi-directional.

13. (Currently Amended) An actuated seal assembly for controlling flow in a fluid path in turbomachinery comprising:

a seal;

a seal carrier coupled to said seal, said seal carrier disposed in said turbomachinery;

a displacement apparatus coupled to said seal carrier for positioning said seal to control said flow in said fluid path, wherein said displacement apparatus is selected from the group consisting of an actuator, a return device, and combinations thereof; and

a drive system for powering said displacement apparatus. ~~The actuated seal of claim 1-4, wherein said drive system comprises a motor is selected from the group consisting of motors, electric power supplies and liquid drives.~~

Appl. No. 09/683,254

Response Dated 1/13/2004

Reply to Office action of October 14, 2003

14. (Original) The actuated seal of claim 13, wherein said motor is selected from the group consisting of a linear motor and rotary motor.

15. (Original) The actuated seal of claim 13, wherein said motor further comprises a coupling.

16. (Original) The actuated seal of claim 15, wherein said coupling is selected from the group consisting of a gear, cable and pulley.

17. (Currently Amended) The actuated seal of claim + 13, wherein said seal carrier is disposed in a turbine housing of the said turbomachinery.

18. (Currently Amended) The actuated seal of claim + 13, wherein said seal carrier is disposed in a labyrinth seal.

19 – 51. (Cancelled)